

### ABSTRACT

An automotive vehicle frame reinforcement system has a skeleton member  
5 designed to be secured to a vehicle frame, such as a roof or pillar section. An  
expandable material, such as an epoxy-based reinforcing foam, is disposed on the  
skeleton member. Once the system is attached to the frame, the foam expands and  
cures during an automobile assembly operation, bonding the reinforcement system to  
the frame. As a result, the reinforcement system provides enhanced load distribution  
10 over the vehicle frame without adding excessive weight.